

Application No. 10/635,807
Amendment Dated 10/21/2005
Reply to Office Action of April 21, 2005

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-7 (canceled).

Claim 8. (currently amended) A system as in claim 1, further comprising An implantable system for draining cerebrospinal fluid (CSF), said system comprising: a conduit having a first opening and a second opening, the first opening of the conduit being adapted to be disposed in fluid communication with a space with a patient's CSF space and the second opening being adapted to be disposed in fluid communication with a drainage location in another portion of the patient's body;

a pump coupled to the conduit to induce flow from the CSF space to the drainage location;

an implantable battery connectable to power the pump; and
a recirculation loop and a valve in the recirculation loop, wherein the valve selectively directs flow to the drainage end of the conduit or to an inlet of the pump.

Claim 9. (previously presented) A system as in claim 8, further comprising a pressure transducer connected to the valve.

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Claims 10-20 (canceled).

Claim 21. (currently amended) A system as in a claim 16, further comprising a
An implanted system for draining cerebrospinal fluid (CSF), said system comprising:
a conduit having a first opening and a second opening, the first opening of the
conduit being adapted to be disposed in fluid communication with a space within a patient's CSF
space and the second opening being adapted to be disposed in fluid communication with a
drainage location in another portion of the patient's body;
a pump of a type selected from the group consisting of diaphragm pumps, piston
pumps, rotor pumps, peristaltic pumps, and screw pumps coupled to the conduit to induce flow
from the CSF space to the drainage location; and
an implantable battery connectable to power the pump, and a
recirculation loop and a valve in the recirculation loop, wherein the valve
selectively directs flow to the drainage end of the conduit or to an inlet of the pump.

Claim 22. (previously presented) A system as in claim 21, further comprising a pressure transducer connected to the valve.

Claims 23-25 (canceled).

Claim 26. (previously presented) An implantable system for draining cerebrospinal fluid

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(CSF), said system comprising:

a conduit having a first opening and a second opening, the first opening of the conduit being adapted to be disposed in fluid communication with a space within a patient's CSF space and the second opening being adapted to be disposed in fluid communication with a drainage location in another portion of the patients body;

a pump coupled to the conduit to induce flow from the CSF space to the drainage location;

an implantable power source connectable to power the pump; and

a recirculation loop and a valve in the recirculation loop, wherein the valve selectively directs flow to the drainage end of the conduit or to an inlet of the pump.

Claim 27. (previously presented) A system as in claim 26, wherein the pump is of a type selected from the group consisting of diaphragm pumps, piston pumps, rotor pumps, peristaltic pumps, and screw pumps.

Claim 28. (previously presented) A system as in claim 26, wherein the power source is a battery.

Claim 29. (previously presented) A system as in claim 26, wherein the pump is adapted to be operated on demand.

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Claim 30. (previously presented) A system as in claim 26, wherein the pump is programmed to operate on a schedule.

Claim 31. (previously presented) A system as in claim 26, wherein the pump comprises a hermetically sealed pump drive.

Claim 32. (previously presented) A system as in claim 26, further comprising a pressure transducer connected to the valve.

Claim 33. (previously presented) A system as in claim 26, wherein the conduit comprises:

a ventricular catheter having a proximal end and a distal end adapted for implantation into the CSF space; and

a peritoneal catheter having a proximal end and a distal end adapted for implantation into the drainage location in the patient's peritoneum, wherein the pump is connected to receive CSF from the ventricular catheter and deliver CSF to the peritoneal catheter.

Claim 34. (previously presented) A system as in claim 33, wherein the ventricular catheter has a length in the range from 10 cm to 50 cm and a lumen having a diameter in the range from 0.1 mm to 2 mm.

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Claim 35. (previously presented) A system as in claim 33, wherein the peritoneal catheter has a length in the range from 25 cm to 125 cm and a lumen having a diameter in the range from 0.1 mm to 2 mm.